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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/936,624	LEAR ET AL.	
	Examiner	Art Unit	
	MARK A. MAIS	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-18,22-25,28-33,36-38 and 46-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-18,22-25,28-33,36-38 and 46-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 13, 2009 has been entered.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 28-33 and 38 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C. 101 must (1) be tied to particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of In Re Bilski 88 USPQ2d 1385. The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process. Method Claims 28

and 38 recite "obtaining...comparing...[and] selecting" steps which can broadly interpreted as receiving a printout, comparing the results of a printout, and then, ultimately, selecting the best route. Basically, the recited steps can be performed manually and are not tied to a machine. Claims 29-33 are also rejected since they depend from claim 28 and contain the same deficiency. In addition, (a) claims 29 and 30 recite "performing trace route mapping" which are interpreted as manually drawing a map on a piece of paper; and (b) claims 31-33 recite "accessing" steps which are interpreted as a human reading the printout.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 50-51, and 54-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Kenner et al. (USP 6,502,125).

6. With regard to claim 50, Kenner et al. discloses an Intelligent Distribution Network (IDN) management center **[Fig. 1, Mirror Service Provider (MSP) 32]**, comprising:

a node database **[traceroute information is stored in Mirror Service Provider (MSP) 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35]** of a plurality of IDN nodes of the IDN, the plurality of IDN nodes are located at divergent data locations on the network and are configured to provide requested content to clients **[Delivery sites have the same content as Content Providers, col. 3, line 63 to col. 4, line 4]**;

a network trace cache for storing results of trace routes to the plurality of IDN nodes and to the clients **[database, col. 8, lines -1-2]**;

a machine readable medium having embodied thereon a program, the program being executable by a machine **[col. 8, lines 5-6]** to cause the management center to perform the following actions:

receive a request for content from a client on the network **[client requests delivery site file, col. 5, lines 50-56]**;

analyze the results of the trace routes to determine an electronically best-performing IDN node for streaming the requested content to the client from among the plurality of IDN nodes **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18]**; and

direct the client to access the requested content from the best performing IDN node **[Assigns clients to delivery sites based on network performance, Abstract]**.

7. With regard to claim 51, Kenner et al. discloses that the program further causes the management center to control communications between the electronically best performing IDN node and the media source to provide the requested content to the electronically best performing

IDN node for streaming to the client **[MSP 32 provides management functions to distribution of Delivery Sites 26, 28, and 30 as well as allocation of requests to Content Providers 22, 24/Delivery Sites 26, 28, and 30, col. 7, lines 67; Delivery sites have the same content as Content Providers, col. 3, line 63 to col. 4, line 4; i.e., a broadcast stream is delivered from the Content Provider to the Delivery Site]**

8. With regard to claim 54, Kenner et al. discloses that analyzing the trace route results comprises client location identification **[Fig. 1, e.g., client 12]**, node-client relationship analysis **[for example, a subscription-based service, col. 16, lines 21-32]** and node- node relay delegations **[a "Smart Mirror" parameter to determine which Smart Mirror site to use, col. 15, lines 23-27]**.

9. With regard to claim 55, Kenner et al. discloses that analyzing the trace route results comprises evaluating whether existing information exists in the trace cache concerning which of the plurality of nodes is best situated to serve the content to the client **[determines if it has an updated delivery site file, col. 8, lines 28-38]** and if the information does not exist or is outdated, initiating further trace routes to the client to obtain updated results for analysis and analyzing the updated results **[gets the new/updated delivery site file from MSP 32, col. 8, lines 25-27; Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18]**.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1-5, 7-18, 22-25, 28-33, 36-38, 46-49, 52, 56-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenner et al. (USP 6,502,125) in view of Leighton et al. (USP 7,111,061).

12. With regard to claim 1, Kenner et al. discloses a system for efficient distribution of data to a client through a distributed computer network **[Fig. 1]**, comprising:

a management center **[Fig. 1, Mirror Service Provider (MSP) 32]** connected to the network **[Fig. 1, Internet 10]** for determining an *electronically best-performing node* and directing the data *to the client from the electronically best-performing node* **[Assigns clients to delivery sites based on network performance, Abstract]**; and

a plurality of nodes configured to relay the data for delivery to the client **[Fig. 1, Delivery Sites 26, 28, 30]**;

wherein the management center comprises a mapping engine for mapping trace routes between the management center and *each of the plurality of nodes* **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites**

26, 28, and 30; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites], and *for mapping* trace routes between the management center and the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and client 12]**, *and for storing results of the trace routes in a trace cache* **[database, col. 8, lines -1-2]**, *wherein the management center analyzes the results of the trace routes* in order to determine *the electronically best-performing node from among the plurality of nodes* **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35]**.

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense using known methods (traceroute, network analysis tests) to achieve a predictable results (saved traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

Kenner et al. does not specifically disclose that MSP 32 is co-located with a Delivery Site. However, is well-known in the art to co-locate multiple servers/devices in one location. For example, Leighton et al. (USP 7,111,061) discloses co-located network agents 202a and 202b with West Coast Data Center 203a **[Leighton et al., Fig. 2]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have co-located MSP 32 with, for example, Delivery Site 28 **[Kenner et al., Fig. 1]**, in order to co-locate devices within a telecommunications facility in order to map a traceroute to the client directly from MSP 32/Delivery Site 28 as well as manage the traceroutes/network performance with regard to the other nodes **[Kenner et al., Fig. 1, Content Providers 22,24/Delivery Sites 26, 30]**.

13. With regard to claim 2, Kenner et al. discloses that the *electronically best-performing* node buffers the data before replicating a plurality of the data for delivery to multiple clients **[a Delivery Site stores data including broadcast video (interpreted as buffering the broadcast data), col. 7, lines 57-62]**.

14. With regard to claim 3, Kenner et al. discloses that the *electronically best-performing* node buffers the data before replication **[a Delivery Site stores data including broadcast video (interpreted as buffering the broadcast data), col. 7, lines 57-62]**.

15. With regard to claim 4, Kenner et al. discloses at least one content provider, the content provider providing at least one stream of data to the network **[Fig. 1, Content Providers 22, 24; provide broadcast video, col. 7, lines 57-62]**.

16. With regard to claim 5, Kenner et al. discloses at least one zone master for assisting the management center with managing downstream nodes **[MSP 32 provides management functions to distribution of Delivery Sites 26, 28, and 30 as well as allocation of requests to Content Providers 22, 24/Delivery Sites 26, 28, and 30, col. 7, lines 63-67; one zone is interpreted as one request from one user]**.

17. With regard to claim 7, Kenner et al. discloses that the management center further comprises a content manager for managing registration of content provider details **[MSP 32 provides management functions to distribution of Delivery Sites 26, 28, and 30 as well as allocation of requests to Content Providers 22, 24/Delivery Sites 26, 28, and 30, col. 7, lines 63-67; registration is interpreted mirroring the original website, col. 5, lines 50-56]**.

18. With regard to claim 8, Kenner et al. discloses that the management center further comprises a node controller for monitoring and informing the *plurality of nodes* **[MSP 32 provides management functions to distribution of Delivery Sites 26, 28, and 30 as well as allocation of requests to Content Providers 22, 24/Delivery Sites 26, 28, and 30, col. 7, lines 63-67]**.

19. With regard to claim 9, Kenner et al. discloses that the management center further comprises a log management controller for compiling and processing log statistics received from the at least one node **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35]**.

20. With regard to claim 10, Kenner et al. discloses that the management center further comprises an interface engine for allowing access to management center databases **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35; interpreted as generating a delivery site file, col. 8, lines 40-42]**.

21. With regard to claim 11, Kenner et al. discloses that the data is distributed via channels **[channel is interpreted as a link/route between a Delivery Site and a Client; for example, a subscription-based service, col. 16, lines 21-32]**.

22. With regard to claim 12, Kenner et al. discloses that the data is time-staggered versions of identical content to achieve virtual fast-forward and rewind **[audio/video clips from a Delivery Site is played on a MPEG video player which has fast-forward/rewind functions, col. 14, lines 26-57]**.

23. With regard to claim 13, Kenner et al. discloses that clients are delivered local content at predetermined or incident-invoked times for a predetermined duration **[MPEG movies, when allowed, have a known duration when played on-demand and are already loaded on the client's computer, col. 14, line 58 to col. 15, line 12]**.

24. With regard to claim 17, Kenner et al. discloses that the data is general Internet data **[other kinds of computer data, col. 17, lines 1-10]**.

25. With regard to claim 18, Kenner et al. discloses that the data is on-demand content **[for example, a subscription-based service, col. 16, lines 21-32; uses content rating filter, col. 16, lines 40-55]**.

26. With regard to claim 46, Kenner et al. discloses that the management center downgrades lower priority clients from a higher quality of service network link to a less optimal network link when a higher priority client requests use of the higher quality of service network link **[subscription-based service, col. 16, lines 21-32; uses content rating filter, col. 16, lines 40-55; thus, non-subscribed users cannot use the subscription Delivery Site and necessarily must use a less optimal link from a prioritized list of Delivery Sites, Col. 13, lines 39-42]**.

27. With regard to claim 47, Kenner et al. discloses that the at least one node is used to buffer and resynchronize multiple streams of content **[a Delivery Site stores data including multiple streams of broadcast video (interpreted as buffering and re-synchronizing the broadcast data streams), col. 7, lines 57-62]**.

28. With regard to claim 48, Kenner et al. discloses that each of the plurality of nodes is configured to buffer a stream of the data and relay the data to the client **[a Delivery Site stores**

data including broadcast video (interpreted as buffering the broadcast data), col. 7, lines 57-62].

29. With regard to claim 49, Kenner et al. discloses that each of the plurality of nodes comprises a computer readable medium having embodied thereon a program, the program being executable by a machine **[This claim is interpreted as an apparatus claim]** to relay streaming media to clients responsive to signals from the management center **[MSP 32 assigns clients to delivery sites based on network performance, Abstract]**.

30. With regard to claim 22, Kenner et al. discloses a method for distribution of data to a client through a computer network **[Fig. 1]**, comprising the steps of:

determining an optimal delivery route from a content provider to a client, wherein determining the optimal delivery route **[Assigns clients to delivery sites based on network performance, Abstract]** comprises

mapping trace routes between a management center **[Fig. 1, Mirror Service Provider (MSP) 32]** and a plurality of nodes **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites]** and between the management center and the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and client 12]** and

comparing the trace routes between the management center and the plurality of nodes to the trace routes between the management center and the client to determine an optimal node **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35]**;

transmitting a data stream from the content provider through the network **[Delivery sites have the same content as Content Providers, col. 3, line 63 to col. 4, line 4; i.e., a broadcast stream is delivered from the Content Provider to the Delivery Site]**;

receiving the data at the optimal node to the client **[Fig. 1, e.g., Delivery Site 26]**; and

relaying the data for delivery to the client **[Fig. 1, e.g., client 12]**.

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense using known methods (traceroute, network analysis tests) to achieve a predictable results (saved traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

Kenner et al. does not specifically disclose that MSP 32 is co-located with a Delivery Site. However, is well-known in the art to co-locate multiple servers/devices in one location. For example, Leighton et al. (USP 7,111,061) discloses co-located network agents 202a and 202b with West Coast Data Center 203a **[Leighton et al., Fig. 2]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have co-located MSP 32 with, for example, Delivery Site 28 **[Kenner et al., Fig. 1]**, in order to co-locate devices within a telecommunications facility in order to map a traceroute to the client directly from MSP 32/Delivery Site 28 as well as manage the traceroutes/network performance with regard to the other nodes **[Kenner et al., Fig. 1, Content Providers 22,24/Delivery Sites 26, 30]**.

31. With regard to claim 23, Kenner et al. discloses transmitting the data through a path of a plurality of nodes before reaching the optimal node **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; this maps the multiple node/servers/routers on the path]**.

32. With regard to claim 24, Kenner et al. discloses that the management center determines the path **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35; interpreted as generating a delivery site file, col. 8, lines 40-42]**.

33. With regard to claim 25, Kenner et al. discloses substituting content local to the optimal

node into the data stream **[a Delivery Site stores data including broadcast video, col. 7, lines 57-62; this is interpreted as delivering local content to the client]**.

34. With regard to claim 28, Kenner et al. discloses a method for determining an optimal delivery route from a content provider to a client within a network **[Fig. 1]**, comprising the steps of:

obtaining a trace route from a management center **[Fig. 1, Mirror Service Provider (MSP) 32]** to the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and client 12]**;

comparing results **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35]** of the trace route from the management center to the client to results of a plurality of trace routes from the management center to a plurality of nodes within the network **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites]** to provide a hierarchical estimate of a plurality of more efficient network links from nodes within the network to the client; and

selecting a most efficient network link as the optimal delivery route **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the**

database, col. 11, lines 28-35; interpreted as generating a delivery site file, col. 8, lines 40-42].

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense using known methods (traceroute, network analysis tests) to achieve a predictable results (saved traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

Kenner et al. does not specifically disclose that MSP 32 is co-located with a Delivery Site. However, is well-known in the art to co-locate multiple servers/devices in one location. For example, Leighton et al. (USP 7,111,061) discloses co-located network agents 202a and 202b with West Coast Data Center 203a **[Leighton et al., Fig. 2]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have co-located MSP 32 with, for example, Delivery Site 28 **[Kenner et al., Fig. 1]**, in order to co-locate devices within a telecommunications facility in order to map a traceroute to the client directly from MSP 32/Delivery Site 28 as well as manage the traceroutes/network performance with regard to the

other nodes **[Kenner et al., Fig. 1, Content Providers 22,24/Delivery Sites 26, 30]**.

35. With regard to claim 29, Kenner et al. discloses performing trace route mappings between the node of the most efficient network link and the client to determine the optimal delivery route **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; this maps the multiple node/servers/routers on the path; other (most efficient link) tests include throughput, throughput variation, error rate, packet fragmentation, capacity query, macroscopic network analysis, col. 10, line 6 to col. 11, line 18]**.

36. With regard to claim 30, Kenner et al. discloses performing trace route mappings between the management center and the nodes **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30]**.

37. With regard to claim 31, Kenner et al. discloses accessing a database in the management center containing trace route data for the nodes **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35]**.

38. With regard to claim 32, Kenner et al. discloses accessing a location compiled table for node location data within a zone **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35; one zone is interpreted as one request from one user]**.

39. With regard to claim 33, Kenner et al. discloses accessing a best performing node index unique router address table **[Delivery Sites are known by IP Addresses, col. 9, lines 6-9; thus, the addresses of the Delivery Sites, stored in MSP 32, are stored in at least a routing table]**.

40. With regard to claim 36, Kenner et al. discloses a computer readable medium having embodied thereon a program **[this well known in the art]**, the program being executable by a machine to perform the method step for determining an optimal delivery route from a content provider to a client within a network **[Fig. 1]**, the method steps comprising:

obtaining a trace route from a management center **[Fig. 1, Mirror Service Provider (MSP) 32]** to the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and client 12]**;

comparing results **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35]** of the trace route from the management center to the client to results of a plurality of trace routes from the management center to a plurality of nodes within the network **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18;**

network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30] to provide a hierarchical estimate of a plurality of more efficient network links from nodes within the network to the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; this maps the multiple node/servers/routers on the path; other (most efficient link) tests include throughput, throughput variation, error rate, packet fragmentation, capacity query, macroscopic network analysis, col. 10, line 6 to col. 11, line 18]**; and

selecting the most efficient network link as the optimal delivery route **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35; interpreted as generating a delivery site file, col. 8, lines 40-42]**.

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense using known methods (traceroute, network analysis tests) to achieve a predictable results (saved

traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

Kenner et al. does not specifically disclose that MSP 32 is co-located with a Delivery Site. However, is well-known in the art to co-locate multiple servers/devices in one location. For example, Leighton et al. (USP 7,111,061) discloses co-located network agents 202a and 202b with West Coast Data Center 203a **[Leighton et al., Fig. 2]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have co-located MSP 32 with, for example, Delivery Site 28 **[Kenner et al., Fig. 1]**, in order to co-locate devices within a telecommunications facility in order to map a traceroute to the client directly from MSP 32/Delivery Site 28 as well as manage the traceroutes/network performance with regard to the other nodes **[Kenner et al., Fig. 1, Content Providers 22,24/Delivery Sites 26, 30]**.

41. With regard to claim 37, Kenner et al. discloses performing trace route mappings between the nodes of the most efficient network links and the client to determine the optimal delivery route **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; this maps the multiple node/servers/routers on the path; other (most efficient link) tests include throughput, throughput variation, error rate, packet fragmentation, capacity query, macroscopic network analysis, col. 10, line 6 to col. 11, line 18]**.

42. With regard to claim 38, Kenner et al. discloses a method for determining an optimal delivery route from a first computing device **[Fig. 1, e.g., Delivery Site 28]** to a second computing device **[Fig. 1, e.g., client 12]** within a network, comprising the steps of:

obtaining a trace route from a management center **[Fig. 1, Mirror Service Provider (MSP) 32]** to the first **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30]** and second **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and client 12]** computing devices;

comparing results of the trace route from the management center to the first and second computing devices to results of a plurality of trace routes from the management center to a plurality of nodes within the network **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites; e.g., Fig. 1, Content Providers 22, 24/Delivery Sites 26 and 30]** to provide a hierarchical estimate of a plurality of more efficient network links from nodes within the network to the first and second computing devices **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; this maps the multiple node/servers/routers on the path; other (most efficient link)**

tests include throughput, throughput variation, error rate, packet fragmentation, capacity query, macroscopic network analysis, col. 10, line 6 to col. 11, line 18]; and

performing trace route mappings between nodes of the most efficient network links and the first and second computing devices **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; this maps the multiple node/servers/routers on the path; other (most efficient link) tests include throughput, throughput variation, error rate, packet fragmentation, capacity query, macroscopic network analysis, col. 10, line 6 to col. 11, line 18]**.

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense using known methods (traceroute, network analysis tests) to achieve a predictable results (saved traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

Kenner et al. does not specifically disclose that MSP 32 is co-located with a Delivery Site. However, is well-known in the art to co-locate multiple servers/devices in one location. For

example, Leighton et al. (USP 7,111,061) discloses co-located network agents 202a and 202b with West Coast Data Center 203a **[Leighton et al., Fig. 2]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have co-located MSP 32 with, for example, Delivery Site 28 **[Kenner et al., Fig. 1]**, in order to co-locate devices within a telecommunications facility in order to map a traceroute to the client directly from MSP 32/Delivery Site 28 as well as manage the traceroutes/network performance with regard to the other nodes **[Kenner et al., Fig. 1, Content Providers 22,24/Delivery Sites 26, 30]**.

43. With regard to claim 56, Kenner et al. discloses an intelligent distribution network (IDN) system **[Fig. 1]** comprising:

an IDN management center **[Fig. 1, Mirror Service Provider (MSP) 32]** comprising a mapping engine for performing trace routes **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites]** and a network trace cache for storing results of trace routes **[database, col. 8, lines -1-2]**; and

a plurality of IDN nodes **[Fig. 1, Content Providers 22, 24/Delivery Sites 26, 28, and 30]**, each of the IDN nodes being configured to provide requested media content to clients **[Fig. 1, e.g., client 12]**;

wherein the management center, responsive to a request for content from a requesting client **[client requests delivery site file, col. 5, lines 50-56]**, analyzes the results of the trace

routes to determine an electronically best- performing IDN node for streaming the requested content to the requesting client from among the plurality of IDN nodes **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites]**, and directs the client to access the requested content from the best performing IDN node **[MSP 32 assigns clients to delivery sites based on network performance, Abstract]**.

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense using known methods (traceroute, network analysis tests) to achieve a predictable results (saved traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

Kenner et al. does not specifically disclose that MSP 32 is co-located with a Delivery Site. However, is well-known in the art to co-locate multiple servers/devices in one location. For

example, Leighton et al. (USP 7,111,061) discloses co-located network agents 202a and 202b with West Coast Data Center 203a **[Leighton et al., Fig. 2]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have co-located MSP 32 with, for example, Delivery Site 28 **[Kenner et al., Fig. 1]**, in order to co-locate devices within a telecommunications facility in order to map a traceroute to the client directly from MSP 32/Delivery Site 28 as well as manage the traceroutes/network performance with regard to the other nodes **[Kenner et al., Fig. 1, Content Providers 22,24/Delivery Sites 26, 30]**.

44. With regard to claim 57, Kenner et al. discloses that the trace routes include trace routes between the management center and each of the plurality of nodes **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites]** and trace routes between the management center and the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and client 12]**.

45. With regard to claim 58, Kenner et al. discloses that each of the plurality of IDN nodes comprises stored IDN instructions for conducting trace routes between each respective one of the plurality of IDN nodes and the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18;**

e.g., Fig. 1, between MSP 32 and client 12; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites and the client], and wherein the results of trace routes between the plurality of nodes and the client are stored in the trace cache **[database, col. 8, lines -1-2]** of the management center.

46. With regard to claim 59, Kenner et al. discloses that analyzing the trace route results comprises client location identification **[Fig. 1, e.g., client 12]**, node-client relationship analysis **[for example, a subscription-based service, col. 16, lines 21-32]** and node- node relay delegations **[a "Smart Mirror" parameter to determine which Smart Mirror site to use, col. 15, lines 23-27]**.

47. With regard to claim 60, Kenner et al. discloses that analyzing the trace route results comprises evaluating whether existing information exists in the trace cache concerning which of the plurality of nodes is best situated to serve the content to the client **[determines if it has an updated delivery site file, col. 8, lines 28-38]** and if the information does not exist or is outdated, initiating further trace routes to the client to obtain updated results for analysis and analyzing the updated results **[gets the new/updated delivery site file from MSP 32, col. 8, lines 25-27; Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18]**.

48. With regard to claim 61, Kenner et al. discloses that the system comprises a plurality of management centers, wherein at least one of the management centers comprises a zone

management center for performing best-performing node analysis within a respective zones of the network **[MSP 32 provides management functions to distribution of Delivery Sites 26, 28, and 30 as well as allocation of requests to Content Providers 22, 24/Delivery Sites 26, 28, and 30, col. 7, lines 63-67; one zone is interpreted as one request from one user]**, wherein the zone comprises at least one IDN node serving a geographical or market demographic region or location **[multiple Delivery Sites with multiple Content Providers are maintained; prioritized rankings of Delivery sites are kept, as well, in case one Delivery Site fails and the next highest ranked Delivery Site must be used, col. 13, lines 10-29]**.

49. With regard to claim 62 Kenner et al. discloses a method of providing streaming services to clients over an intelligent distribution network (IDN) **[Fig. 1]**, comprising:

receiving a request for content from a client **[client requests delivery site file, col. 5, lines 50-56]**;

performing trace routes to a plurality of IDN nodes **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites]** and to the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and client 12]**;

storing results of the trace routes in a trace cache **[database, col. 8, lines -1-2]**;

analyzing the results of the trace routes to determine an electronically best-performing IDN node from among the plurality of IDN nodes for streaming the requested content to the client from among the plurality of IDN nodes **[traceroute information is stored in MSP 32 and continuous test data is correlated to information in the database, col. 11, lines 28-35]**; and

directing the client **[Fig. 1, e.g., client 12]** to access the requested content from the best performing IDN node **[Fig. 1, e.g., Delivery Site 26]**.

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense using known methods (traceroute, network analysis tests) to achieve a predictable results (saved traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

Kenner et al. does not specifically disclose that MSP 32 is co-located with a Delivery Site. However, is well-known in the art to co-locate multiple servers/devices in one location. For example, Leighton et al. (USP 7,111,061) discloses co-located network agents 202a and 202b with West Coast Data Center 203a **[Leighton et al., Fig. 2]**. Thus, it would have been obvious

to one of ordinary skill in the art at the time of the invention to have co-located MSP 32 with, for example, Delivery Site 28 **[Kenner et al., Fig. 1]**, in order to co-locate devices within a telecommunications facility in order to map a traceroute to the client directly from MSP 32/Delivery Site 28 as well as manage the traceroutes/network performance with regard to the other nodes **[Kenner et al., Fig. 1, Content Providers 22,24/Delivery Sites 26, 30]**.

50. With regard to claim 52, Kenner et al. discloses that the trace routes include trace routes between the management center and each of the plurality of nodes **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; network performance is interpreted as mapping traceroutes between Content Providers/Delivery Sites; e.g., Fig. 1, between MSP 32 and Content Providers 22, 24/Delivery Sites 26, 28, and 30]** and trace routes between the management center and the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; e.g., Fig. 1, between MSP 32 and client 12]**.

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense

using known methods (traceroute, network analysis tests) to achieve a predictable results (saved traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

Kenner et al. does not specifically disclose that MSP 32 is co-located with a Delivery Site. However, is well-known in the art to co-locate multiple servers/devices in one location. For example, Leighton et al. (USP 7,111,061) discloses co-located network agents 202a and 202b with West Coast Data Center 203a **[Leighton et al., Fig. 2]**. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have co-located MSP 32 with, for example, Delivery Site 28 **[Kenner et al., Fig. 1]**, in order to co-locate devices within a telecommunications facility in order to map a traceroute to the client directly from MSP 32/Delivery Site 28 as well as manage the traceroutes/network performance with regard to the other nodes **[Kenner et al., Fig. 1, Content Providers 22,24/Delivery Sites 26, 30]**.

51. With regard to claim 53, Kenner et al. discloses that the management center sends instructions to the plurality of nodes to cause the plurality of nodes to conduct trace routes between the plurality of nodes and the client **[Smart mirroring, col. 5, lines 20-25; includes traceroute, reverse traceroute, and dynamic traceroute, col. 9, line 61 to col. 11, line 18; this maps the multiple node/servers/routers on the path; other (most efficient link) tests include throughput, throughput variation, error rate, packet fragmentation, capacity query, macroscopic network analysis, col. 10, line 6 to col. 11, line 18]**, and wherein the results of

trace routes between the plurality of nodes and the client are stored in the trace cache **[database, col. 8, lines -1-2]**.

The prior art [Kenner et al.] teaches the known technique of sending instructions to client nodes to conduct traceroutes/perform network analysis tests. A person of ordinary skill in the art would have recognized that applying the known technique of sending instructions to different nodes to conduct traceroutes/performing network analysis tests would have yielded predictable results and would have improved the network analysis of Kenner et al. when sending instructions to Delivery Sites to conduct traceroutes/perform network analysis tests. Moreover, Kenner et al. teaches the claimed invention in terms of familiar elements (MSP 32, Content Providers, Delivery Sites, and clients) that would have been combined by an artisan using common sense using known methods (traceroute, network analysis tests) to achieve a predictable results (saved traceroutes/network analysis of the nodes/links between all the familiar elements) at the time of the invention. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results."

52. With regard to claims 14-16, Applicants have not disclosed that changing the type of data delivered from video-on-demand to telephone data, video conferencing data, or live media content, solves any stated problem or is for any particular purpose. It appears that the different types of data would be delivered equally well as the video data delivered to multiple terminals by the multi-node media server disclosed in Kenner et al. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kenner et al. to use the same delivery methodology for the multiple client terminals because such modifications

are considered a mere design choice consideration, which fails to patentably distinguish over the prior art of Kenner et al. In addition, changing the type of low latency/high QOS data delivered in Kenner et al. is interpreted as an optimum value for a known process. A discovery of an optimum value for a known process is obvious engineering. *See* In re Aller, 105 USPQ 233 (CCPA 1955).

Response to Arguments

53. Applicant's arguments with respect to claims 1-5, 7-18, 22-25, 28-33, 36-38, and 46-62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

54. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Kenner et al. (USP 6,502,125) in view of Leighton et al. (USP 7,111,061).

(a) Hunter et al. (USP 7,370,016), Music distribution systems.

(b) Kenner et al. (USP 6,665,706), System and method for optimized storage and retrieval on a distributed computer system.

(c) Swildens et al. (USP 6,484,143), User device and system for traffic management and content distribution over a world wide area network.

(d) Lewin et al. (USP 7,010,578), Internet content delivery service with third party cache interface support.

(e) Leighton et al. (USP 7,251,688), Method for generating a network map.

(f) Leighton et al. (USP 7,293,093), HTML delivery from edge-of-network servers in a Content Delivery Network (CDN).

(g) Levine et al. (USP 7,028,083), Method for extending a network map.

(h) Rochford et al. (USP 6,487,604), Route monitoring graphical user interface, system, and method.

(i) Zisapel et al. (USP 6,718,359), Load balancing.

55. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK A. MAIS whose telephone number is (571)272-3138. The examiner can normally be reached on M-Th 9am-8pm.

56. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached on 571-272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

57. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 25, 2009

/Mark A. Mais/

Examiner, Group Art Unit 2419

/Wing F. Chan/

Supervisory Patent Examiner, Art Unit 2419

3/25/09